

LEGEND

- ① W150X37 WITH 35 mm DIA. HOLES ON EACH SIDE OF POST FOR STUD NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- ② PLATE 25 mm X 240 mm X 255 mm WITH 27 mm X 40 mm SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
- ③ A325M - M22 HEX BOLTS (GALVANIZED) WITH A325M NUT & WASHER. 350 mm LONG AT END POSTS AND AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 375 mm. USE 200 mm LONG AT ALL OTHER LOCATIONS. 4 REQ'D. PER POST. THREAD 75 mm AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING.
- ④ 6 mm X 200 mm X 200 mm FLAT BAR, WITH 24 mm DIA. HOLES FOR ANCHOR BOLTS NO. 3.
- ⑤ TS 102 X 102 X 6.4 STRUCTURAL TUBING, CONFORMING TO A.S.T.M. DESIGNATION A501 OR A500 GRADE B. ATTACH TO NO. 1 WITH STUDS NO. 6.
- ⑥ 16 mm DIA. X 40 mm LG. SHOP WELDED STUDS WITH HEX. NUT AND 50 mm WASHERS. (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
- ⑦ PLATE 10 mm X 400 mm ( 475 mm ON SDWK.) X 510 mm .BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO.5.
- ⑧ 25 mm DIA. HOLES IN PLATE NO. 7 & TUBES NO.5 FOR M22 A325M BOLTS W/HEX NUTS AND WASHERS.
- ⑨ SQUARE SLEEVE FABRICATED FROM 6 mm PLATE. PROVIDE "SLIDING FIT" WITH A MINIMUM OUT TO OUT DIMENSION OF 87 mm.
- ⑩ TS 76 X 76 X 6.4 X ( 700 mm AT EXPANSION JOINTS) & (560 mm AT FIELD JOINTS) LONG. PROVIDE 13 mm DIA. SURFACE WELDS ON ALL SIDES AS SHOWN. GRIND WELDS TO FIT FREE INTO I.D. OF NO. 5. PROVIDE 10 mm DIA. X 15 mm WELDING STUDS ON TOP AND BOTTOM SURFACES AT CENTERLINE.

GENERAL NOTES

BID ITEM SHALL BE "TUBULAR RAILING TYPE 'F'", WHICH INCLUDES ALL ITEMS SHOWN.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

POST BASE PLATES, NO. 2, SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

FOR RAILING NOT TO BE PAINTED, ALL MATERIAL EXCEPT ANCHORAGE (NO. 4 ) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.

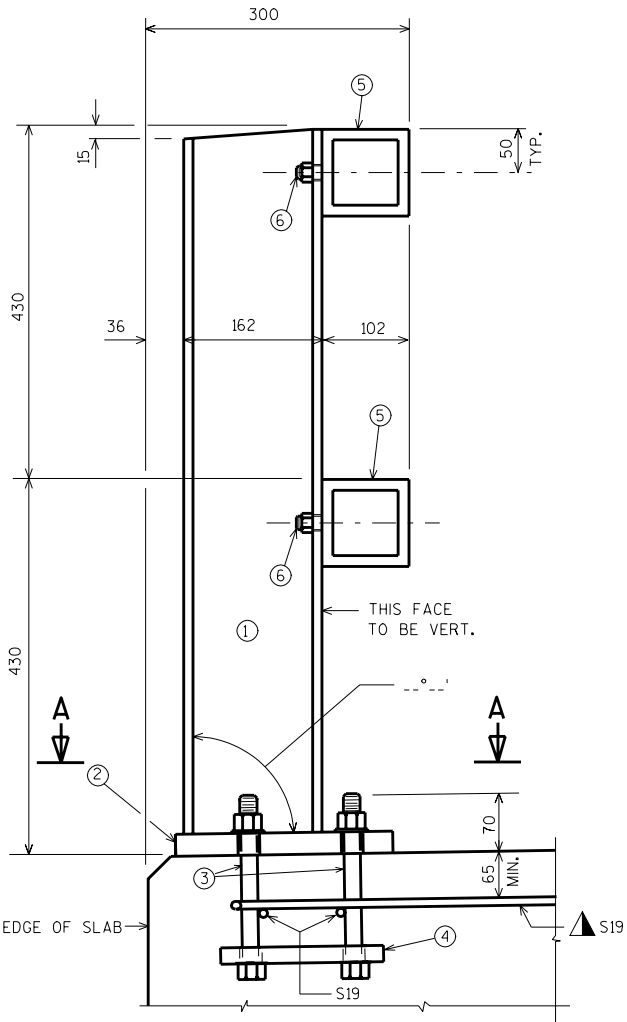
FOR RAILING TO BE PAINTED, ALL MATERIAL EXCEPT ANCHORAGE (NO. 3 & 4) SHALL BE PAINTED WITH A THREE-COAT ZINC RICH EPOXY SYSTEM. PRIOR TO PAINTING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 11 NEAR WHITE BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.

FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

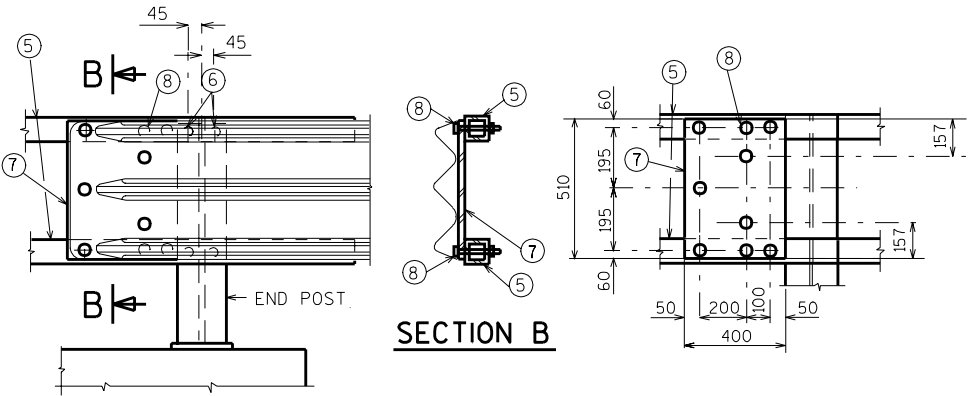
ALL MATERIALS USED IN FABRICATION SHALL BE MADE FROM MATERIALS CONFORMING TO ASTM A709M GRADE 250 UNLESS NOTED OTHERWISE.

STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.

▲ TIE TO TOP MAT OF STEEL.



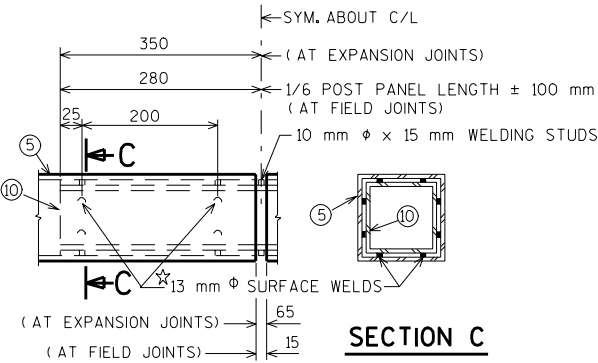
SECTION THRU RAILING ON DECK



SECTION B

DETAIL AT END POST

(THRIE BEAM RAIL ATTACHMENT)

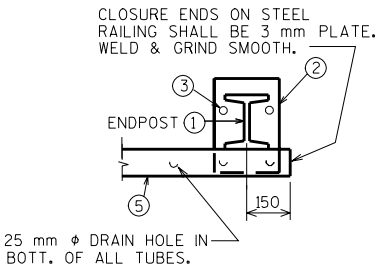


SECTION C

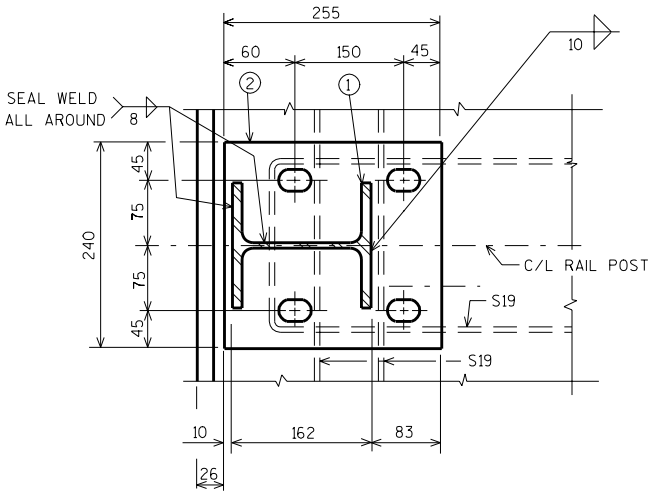
FIELD ERECTION

JOINT DETAIL

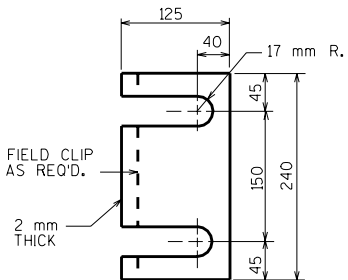
★ MIN. 15 mm FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



DETAIL FOR END POSTS



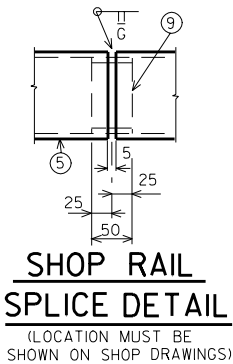
SECTION A



POST SHIM

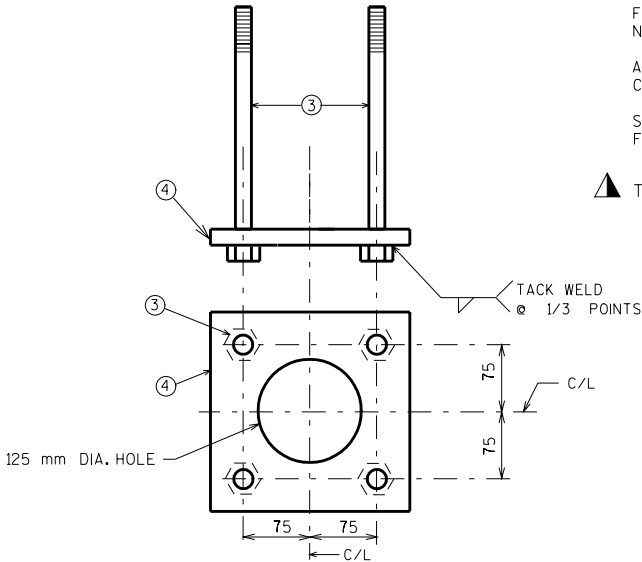
DETAIL

(4 PER POST)



SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



ANCHORAGE DETAIL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE			
CONST. SPEC.	1996	DRAWN BY	PLANS CKD.
TUBULAR RAILING TYPE "F"			SHEET